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EXAMINER

ULM, JOHN D

ART UNIT

PAPER NUMBER

1646

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,895

Applicant(s)

KULP ET AL.

Examiner

John D. Ulm

Art Unit

1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-54 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1) Claims 1 to 54 are pending in the instant application.

2) This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 C.F.R. § 1.821 through 1.825. Applicant needs to **a paper copy** of the "Sequence Listing" which includes all of the sequences that are present in the instant application and encompassed by these rules, **an amendment directing the entry of that paper copy into the specification**, and **a statement that the content of the paper and computer readable copies are the same** and, where applicable, include no new matter, as required by 37 C.F.R. §§ 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d). The instant specification will also need to be **amended** so that it complies with 37 C.F.R. § 1.821(d) which requires a reference to a particular **sequence identifier** (SEQ ID NO:) be made in the specification and claims wherever a reference is made to that sequence. For rules interpretation Applicant may call (703) 308-1123. See M.P.E.P. 2422.04.

3) Claims 1 and 11 to 54 are objected to as reciting an improper Markush Group. M.P.E.P. 803.02 states that:

"Since the decisions in *In re Weber* **, 198 USPQ 328 (CCPA 1978); and *In re Haas*, 198 USPQ 334 (CCPA 1978), it is improper for the Office to refuse to examine that which applicants regard as their invention, unless the subject matter in a claim lacks unity of invention, *In re Harnish* , 631 F.2d 716, 206 USPQ 300 (CCPA 1980); *Ex Parte Hozumi* , 3 USPQ2d 1059 (Bd. Pat. App. & Int. 1984). Broadly, unity of invention exists

where compounds included within a Markush group (1) share a common utility and (2) share a substantial structural feature disclosed as being essential to that utility."

The different sequences recited in these claims do not correspond to a substantial common structural feature that serves as a basis for a common utility.

4) Claims 31 to 52 and 54 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. A properly dependent claim can not conceivably be infringed without infringing any of the claims from which it depends. These claims are improperly dependant because an isolated polypeptide of claim 31, for example, can be infringed by a composition which does not infringe the isolated polynucleotide of claim 1, from which claim 31 depends. See M.P.E.P. 608.01(n)III.

Election/Restrictions

5) Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 435, subclass 69.1.
- II. Claims 1, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in class 435, subclass 69.1.

- III. Claims 1, 2, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classified in class 435, subclass 69.1.
- IV. Claims 1, 3, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classified in class 435, subclass 69.1.
- V. Claims 1, 4, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in class 435, subclass 69.1.
- VI. Claims 1, 5, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in class 435, subclass 69.1.
- VII. Claims 1, 6, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in class 435, subclass 69.1.
- VIII. Claims 1, 7, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in class 435, subclass 69.1.
- IX. Claims 1, 8, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classified in class 435, subclass 69.1.

- X. Claims 1, 9, 11 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 435, subclass 69.1.
- XI. Claims 1, 10 to 30 and 53, in so far as they relate to an isolated polynucleotide comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 435, subclass 69.1.
- XII. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 530, subclass 350.
- XIII. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in 530, subclass 350.
- XIV. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classified in 530, subclass 350.
- XV. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide

sequence presented in Figure **2B** of the instant specification, classified in
classified in 530, subclass 350.

- XVI. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in classified in 530, subclass 350.
- XVII. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in classified in 530, subclass 350.
- XVIII. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in classified in 530, subclass 350.
- XIX. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in classified in 530, subclass 350.
- XX. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classified in classified in 530, subclass 350.

- XXI. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 530, subclass 350.
- XXII. Claims 31, 32 and 54, in so far as they relate to an isolated polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 530, subclass 350.
- XXIII. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 530, subclass 388.22.
- XXIV. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in class 530, subclass 388.22.
- XXV. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classified in class 530, subclass 388.22.

- XXVI. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classified in class 530, subclass 388.22.
- XXVII. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in class 530, subclass 388.22.
- XXVIII. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in class 530, subclass 388.22.
- XXIX. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in class 530, subclass 388.22.
- XXX. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in class 530, subclass 388.22.
- XXXI. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide

sequence presented in Figure **7B** of the instant specification, classified in class 530, subclass 388.22.

XXXII. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 530, subclass 388.22.

XXXIII. Claims 33 to 36, in so far as they relate to an antibody which binds to a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 530, subclass 388.22.

XXXIV. Claims 37 to 41, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XXXV. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XXXVI. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the

nucleotide sequence presented in Figure **1D** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XXXVII. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XXXVIII. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XXXIX. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XL. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

XLI. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

- XLII. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.
- XLIII. Claims 33 to 36, in so far as they relate to a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.
- XLIV. Claims 33 to 36, in so far as they relate a binding assay employing a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.
- XLV. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classification undeterminable.
- XLVI. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in class 435, subclass 7.2 and class 436, subclass 501.

- XLVII. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classification undeterminable.
- XLVIII. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classification undeterminable.
- XLIX. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classification undeterminable.
- L. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classification undeterminable.
- LI. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classification undeterminable.
- LII. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a

polynucleotide comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classification undeterminable.

LIII. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classification undeterminable.

LIV. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classification undeterminable.

LV. Claim 42, in so far as it relates to a compound of unspecified constitution that is a modulator of a polypeptide encoded by a polynucleotide comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classification undeterminable.

LVI Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 435, subclass 6.

LVII Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence

presented in Figure **1C** of the instant specification, classified in class 435, subclass 6.

LVIII Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classified in class 435, subclass 6.

LIX Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classified in class 435, subclass 6.

LX Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in class 435, subclass 6.

LXI Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in class 435, subclass 6.

LXII Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in class 435, subclass 6.

- LXIII Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in class 435, subclass 6.
- LXIV Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classified in class 435, subclass 6.
- LXV Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 435, subclass 6.
- LXVI Claims 43 and 44, in so far as they relate to a diagnostic method employing a polynucleotide comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 435, subclass 6.
- LXVII Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 710, subclass 360.

- LXVIII Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in 710, subclass 360.
- LXIX Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classified in class 710, subclass 360.
- LXX Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classified in class 710, subclass 360.
- LXXI Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in class 710, subclass 360.
- LXXII Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in class 710, subclass 360.
- LXXIII Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in class 710, subclass 360.
- LXXIV Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in class 710, subclass 360.
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- LXXV Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classified in class 710, subclass 360.
- LXXVI Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 710, subclass 360.
- LXXVII Claims 45 to 51, in so far as they relate to a computer readable medium comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 710, subclass 360.
- LXXVIII Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **1B** of the instant specification, classified in class 800, subclass 2.
- LXXIX Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **1C** of the instant specification, classified in 800, subclass 2.
- LXXX Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **1D** of the instant specification, classified in class 800, subclass 2.
- LXXXI Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **2B** of the instant specification, classified in class 800, subclass 2.

LXXXII Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **3B** of the instant specification, classified in class 800, subclass 2.

LXXXIII Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **4B** of the instant specification, classified in class 800, subclass 2.

LXXXIV Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **5B** of the instant specification, classified in class 800, subclass 2.

LXXXV Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **6B** of the instant specification, classified in class 800, subclass 2.

LXXXVI Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **7B** of the instant specification, classified in class 800, subclass 2.

LXXXVII Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **8B** of the instant specification, classified in class 800, subclass 2.

LXXXVIII Claim 52, in so far as it relates to a transgenic animal comprising the nucleotide sequence presented in Figure **9B** of the instant specification, classified in class 800, subclass 2.

The inventions are distinct, each from the other because:

The eleven different nucleic acids of inventions I to XI, the eleven different polypeptides of inventions XII to XXII, the eleven different antibodies of inventions XXIII to XXXIII, the eleven different modulators of inventions XIV to LV, the eleven different computer media of inventions LXVII to LXXVII, and the eleven different transgenic animals of inventions LXXXVIII to LXXXVIII are sixty-six different chemical compositions each of which can be made and used without the others. These sixty-six different compositions lack unity of invention because they do not share a common utility which is based upon a shared structural feature or combination of features lacking from the prior art.

The host cells containing the polynucleotides of each of inventions I to XI and the isolated polypeptides of each inventions XII to XXII are related to the method of each of inventions XXXIV to XLIV as product and process of use. . The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the binding assays of inventions XXXIV to XLIV, as claimed, can be practiced with either a recombinant host cell or an isolated polypeptide.

The polynucleotides of each of inventions I to XI and the antibodies of each inventions XXIII to XXXIII are related to the method of each of inventions LVI to LXVI as product and process of use. The inventions are shown to be distinct because the process for using the product as claimed can be practiced with another materially

different product as shown by the fact the process as claimed can be practiced with either and antibody or a polynucleotide probe, two clearly materially different products

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Ulm whose telephone number is (703) 308-4008. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached at (703) 308-6564.

Official papers filed by fax should be directed to (703) 308-4242 or (703) 872-9306. Official responses under 37 C.F.R. § 1.116 should be directed to (703) 872-9307.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.



JOHN ULM
PRIMARY EXAMINER
GROUP 1600